

**REMARKS**

Claims 1-6, 9-17, 19-24, 26-28, 30 and 31 are pending in the application. All claims stand rejected by non-final Office Action of February 20, 2007. There are four independent claims pending in the application, 1, 13, 30 and 31.

In response, claims 1 and 13 have been amended, and the Specification has been amended. Applicant also makes the following argument in response to the pending Office Action:

1. Buckles is not prior art. Since all rejections in the pending Office Action are based upon a combination of one or more other references in view of Buckles, all rejections should be removed, and all pending claims should be allowed.
2. The Office Action should be withdrawn because it does not appear that the rejection of previously allowed claims 30 and 31 was submitted to a primary examiner for consideration upon all the facts, nor that great care was exercised in authorizing the rejection.
3. A cylindrical ground plane is not an obvious design choice. The withdrawal of the previous allowance of claims 30 and 31 should be removed.

Therefore, reconsideration and allowance of all claims is respectfully requested.

**Amendment to the Specification**

The first paragraph of the Specification in this case as filed states:

This application is a continuation-in-part (C-I-P) of co-pending patent application serial number 10/294,420 filed on November 14, 2002, **which is incorporated herein by reference in its entirety.** (emphasis added)

The '420 Application is now US. Pat. No. U.S. Pat. 6,806,841. The first paragraph of the '420 Application, incorporated in the current case by reference as shown in bold, stated:

This is a Continuation-in-part of patent application Ser. No. **09/803,245, filed Mar. 9, 2001, now U.S. Pat. No. 6,496,152**, for "Dual Polarized Antenna", and a Completion Patent Application of co-pending U.S. Provisional Patent Application Serial No. 60/368,356, filed on Mar. 28, 2002, for "Tri-Element Antenna With Dish", **the disclosures of each hereby incorporated by**

**reference.** (emphasis added)

The first paragraph of the '425 Application, incorporated in the '420 case by reference as shown in bold, stated:

This application claims the benefit of Provisional application Ser. No. 60/188,464, filed Mar. 10, 2000.

Accordingly, the first paragraph of the current Specification has been amended to note that the '420 application is no longer co-pending and that it is now an issued patent, and to describe the history of the parent applications that were incorporated by reference:

This application is a continuation-in-part (C-I-P) of eo-pending patent application serial number 10/294,420 filed on November 14, 2002, now U.S. Pat. 6,806,841, which is a continuation-in-part (C-I-P) of patent application serial number 09/803,245 filed on March 9, 2001, now U.S. Pat. No. 6,496,152, which claims the benefit of U.S. provisional application serial number 60/188,464, filed on March 10, 2000, which is are incorporated herein by reference in its entirety.

#### **Amendment to Claims 1 and 13**

The Final Office Action on June 30, 2006 indicated that claims 30 and 31 were allowed, and that claims 9 and 19 were allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicant previously amended claims 1 and 13 to include the limitation of a cylindrical ground reference. This resulted, however, in claims 1 and 13 being substantially identical to allowed claims 30 and 31.

In order to remove identical claims, Applicant has added to claims 1 and 13 the limitation that the cylindrical shaped ground reference have a closed upper base side. Support for the amendment is found in paragraph [0034] and Figure 2.

**I. BUCKLES IS NOT PRIOR ART**

Buckles, US 6,486,849, issued November 26, 2002, and was filed February 14, 2001. Accordingly, its date for 103(b) purposes is February 14, 2001. It is not prior art to this application.

The present application is a continuation-in-part of Ser. No. 10/294,420, now US 6,806,841, "Tri-Element Antenna With Dish." The '420 application is a continuation-in-part of Ser. 09/803,245, now US 6,496,152, which claimed the benefit of US Provisional Application 60/188,464, "Dual Polarized Antenna," filed on March 10, 2000. The amendment to the specification clarifies this benefit.

The file history of the March 2000 provisional Ser. No. 60/188,464 is available to the Examiner, and an additional courtesy copy for the Examiner has been filed accompanying this response. That provisional teaches and enables the subject matter for which Buckles was cited, e.g., "an antenna comprising more than two radiative antenna elements (...) each having a first end and a second end, and wherein said second ends of said radiative antenna elements are electrically connected at an apex point (...) and are each disposed outwardly away from said apex point at an acute angle relative to and on a first side of an imaginary plane intersecting said apex point." (Office Action, pp. 2-3)

Accordingly, Buckles is not a proper reference against this application. Since all rejections in the pending Office Action are based upon a combination of one or more other references in view of Buckles, all rejections should be removed, and all pending claims should be allowed.

**II. THE 2007 OFFICE ACTION SHOULD BE WITHDRAWN**

Respectfully, Applicant requests that the pending Office Action be withdrawn because it does not appear that the rejection of previously allowed claims 30 and 31 was submitted to a primary examiner for consideration upon all the facts, nor that great care was exercised in authorizing the rejection.

In the Office Action of April 29, 2005 (the "April 2005 Office Action"), the Examiner indicated that seven claims (7, 9, 12, 19, 25, 27 and 28) would be allowed if rewritten in

independent form including all of the limitations of the base claim and any intervening claims. The primary reference for the rejection of the remaining claims was **Moilanen** (5,561,439) in view of Shiina (5,264,858). The following statement of reasons for indication of allowable subject matter were given:

Claims 7, 12, 25, and 27, limitation of the positioning of the radiative elements as recited.

**Claims 9 and 19, limitation of the ground being cylindrical in shape.**

Claim 28, limitation of connecting a motor to antenna to allow rotation of antenna about a defined axis of the antenna.

April 2005 Office Action, p. 4 (emphasis added).

In response, Applicant amended independent claims 1 and 13, to include all of the limitations of claims 7 and 25, respectively, and cancelled claims 7 and 25. In accord with the April 2005 Office Action, those claims were then in condition for allowance. Applicant also traversed the combination of Moilanen in view of Shiina as to the remaining claims.

Instead of an allowance, in the November 16, 2005 Office Action (the “November 2005 Office Action”), the Examiner withdrew the previously indicated allowance of claims 7, 12, 25, 27, and 28, (and the appropriately amended claims 1 and 13) based upon a new search, but **again** stated that Claims 9 and 19 were allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following statement of reasons for indication of allowable subject matter was given:

The prior art neither discloses nor suggests the following limitations in the combination with the remaining elements as disclosed in claims 1 and 13:

**Claims 9 and 19, limitation of the ground being cylindrical in shape.**

November 2005 Office Action, p. 5 (emphasis added). The Applicant’s arguments regarding Moilanen in view of Shiina were rendered moot, as the Examiner had performed a new search, and rejected the remaining claims primarily as obvious over **Moilanen** in view of newly discovered Buckles.

In response, Applicant re-wrote independent claims 1 and 13, to include all of the limitations of claims 9 and 19, respectively, as new independent claims 30 and 31, to include the limitation of the ground being cylindrical in shape. In accord with the November 2005 Office Action, and the April 2005 Office Action, those claims were then in condition for allowance. Applicant also traversed the combination of Moilanen in view of Buckles as to the remaining claims.

Instead of a notice of allowance, the Examiner issued a Final Office Action on June 30, 2006 (the “2006 Final Action”), arguing that the traverse of Moilanen in view of Buckles was unpersuasive, but again stated that Claims 9 and 19, and also new claims 30 and 31, were allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. (N.B. The Examiner characterized independent claims 30 and 31 as dependent.) The following statement of reasons for indication of allowable subject matter was given:

The prior art neither discloses nor suggests the following limitations in the combination with the remaining elements as disclosed in claims 1, 13, 30 and 31:

**Limitation of the antenna comprising a ground reference being cylindrical in shape.**

2006 Final Action, p. 6 (emphasis added). **The 2006 Office Action Summary shows that claims 30 and 31 were allowed.**

In response, the Applicant filed an amendment and RCE. The only amendments to the claims were to take the allowed subject matter, and incorporate the limitation of the antenna comprising a ground reference being cylindrical in shape. In accord with the 2006 Final Action, and the November 2005 Office Action, and the April 2005 Office Action, all claims were in condition for allowance.

Instead of a notice of allowance, the Examiner issued an Office Action on February 20, 2007 (the “2007 Office Action”), **withdrawing the indicated allowance of claims 30 and 31.** No newly discovered art was cited for this withdrawal. Instead, the Examiner took an entirely new approach, and relied upon a new reading of **Moilanen**, which had been the primary

reference in the April 2005 Office Action, the November 2005 Office Action, and the 2006 Final Action. Even though the Examiner in three prior office actions, over a period of 22 months, relied upon Moilanen, for the first time in the 2007 Office Action the Examiner now finds that:

Moilanen discloses the non-planar ground except for the ground being cylindrically shaped. It would have been an obvious matter of design choice to modify the conductive ground of Moilanen to be cylindrically shaped, since applicant has not disclosed that the ground being cylindrically shaped instead of as disclosed in Moilanen solves any stated problem or is for any particular purpose and it appears that Moilanen in view of Buckles would perform equally well with the conductive ground being cone shaped.

2007 Office Action, p. 3. No other explanation is given for the reversal.

Because the rejection of a previously allowed claim is unusual, it is governed by MPEP § 706.04, which provides:

#### **706.04 Rejection of Previously Allowed Claims [R-1]**

A claim noted as allowable shall thereafter be rejected only after the proposed rejection has been submitted to the primary examiner for consideration of all the facts and approval of the proposed action.

Great care should be exercised in authorizing such a rejection. See Ex parte Grier, 1923 C.D. 27, 309 O.G. 223 (Comm'r Pat. 1923); Ex parte Hay, 1909 C.D. 18, 139 O.G. 197 (Comm'r Pat. 1909).

....  
Because it is unusual to reject a previously allowed claim, the examiner should point out in his or her office action that the claim now being rejected was previously allowed by using Form Paragraph 7.50.

#### **¶ 7.50 Claims Previously Allowed, Now Rejected, New Art**

The indicated allowability of claim [1] is withdrawn in view of the newly discovered reference(s) to [2]. Rejection(s) based on the newly cited reference(s) follow.

No newly discovered reference is cited by the Examiner, as MPEP 706.04 seems to require. The Examiner did not use Paragraph 7.50 in the 2007 Office Action, as Section 706.04 explicitly requires. NO EXPLANATION was given why what was obvious to the Examiner in February 2007 was not obvious to the Examiner in June 2006, or November 2005, or April 2005.

Further, the Index of Claims accompanying the 2007 Office Action (the “2007 Index”) fails to include a column for the 2006 Final Action, which would have showed a reviewing primary examiner that claims 30 and 31 were previously allowed. Further still, the 2007 Index and the Index of Claims for the November 2005 Office Action (and the corresponding Office Action Summary) incorrectly indicate that claims 9 and 19 were rejected in the November 2005 Office Action, rather than merely being objected to. Therefore, a reviewing primary examiner would not have clear notice that multiple claims, allowed in multiple prior actions, were now being rejected.

Section 706.04 requires that a proposed rejection of previously allowed claims must be submitted to the primary examiner for consideration of all the facts and approval of the proposed action, and that great care should be exercised in authorizing such a rejection. From the face of this record it does not appear that this has occurred. The 2007 Office Action should therefore be withdrawn.

### **III. A CYLINDRICAL GROUND PLANE IS NOT AN OBVIOUS DESIGN CHOICE**

With due respect, the Examiner was correct three times: in the April 2005 Office Action, the November 2005 Office Action, and the 2006 Final Action. The Examiner is not correct in this fourth time at bat. A cylindrical ground plane in a multi-polarized antenna, and furthermore a cylindrical sleeve having a closed upper base (as now appears in claims 1 and 13), is not an obvious design choice over a conical ground plane. To reach this conclusion requires using the Applicant’s own disclosure as a reference. Further, Moilanen in view of Buckles teaches away from a cylindrical ground reference.

#### A. The Examiner is Using Applicant's Own Disclosure as a Reference

It is without question that a cylindrical sleeve having a closed upper base as a ground plane is neither taught nor suggested by Moilanen, either alone or in combination with Buckles. The Examiner instead relies on the concept of "design choice" to fill in the missing teachings of the reference, but uses inappropriate hindsight reconstruction.

Reliance on design choice is discouraged as a substitute for factual evidence and sound obviousness reasoning. The examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

What the Examiner is doing here is hindsight reconstruction. Only a conical ground plane is found in Moilanen. Because *both* an embodiment to a conical ground plane *and* a cylindrical ground plane with a closed upper base are taught in the present disclosure, the Examiner assumes without any factual basis that it would be obvious to substitute a cylindrical ground plane with a closed upper base for a conical ground plane. This is using the Applicant's disclosure against him.

The Federal Circuit has repeatedly cautioned against employing hindsight by using the

appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. *See, e.g., Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

#### **B. Moilanen In View Of Buckles Teaches Away From A Cylinder Ground Reference**

The Examiner combined Moilanen with Buckles, but that combination teaches away from a cylindrical ground plane. Buckles teaches:

a ground plane structure 60, which can be **a metal plate having an extent at least 2-3 times as large as the diameter subtended by the distal ends of the elements 52A-52N**. The ground plane acts as a mirror for the antenna, and so the **larger the ground plane the better the performance**. C. 1, ll. 60-65 (emphasis added)

A worker looking at Moilanen in view of Buckles would be lead to *flatten* the cone of Moilanen, *e.g.*, increase the base of the cone so as to make the ground plane larger in diameter. This *decreases* the angle between the ground reference and the imaginary plane at the radiative element apex. On the other hand, the present disclosure teaches the *increase* of that same angle:

Generally, the near spherical patterning of the antenna is enhanced the larger the angle is between the ground reference and the imaginary plane at the radiative element apex, and the smaller the angle is between the radiative elements and the imaginary plane.  
Par. 0049.

It is only with the benefit of the present disclosure that a worker would be lead to increase the angle between the ground reference and the imaginary plane, and thereby possibly come to a cylinder, which has a right angle to the imaginary plane. Therefore, the art cited by the Examiner would not support a *prima facie* case of obviousness, and it is again clear that the Examiner is using the Applicant's disclosure to reconstruct the claimed invention from the isolated teachings of the prior art.

**CONCLUSION**

For the reasons given above, all pending claims are believed to be allowable and a Notice of Allowance is requested. At the very least, however, the pending Office Action should be withdrawn, so that the proposed rejection of previously allowed claims 30 and 31 can be submitted to the primary examiner for consideration of all the facts.

If the Examiner believes a telephone conference would aid in the prosecution of this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

A three month extension has been requested. The Commissioner is authorized to charge the fee for that extension and any additional fee due to Deposit Account No. 19-2090.

Respectfully submitted,

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DATED: August 20, 2007

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